

ABSTRACT

Fiber is drawn from a preform comprising a silica body, e.g., a sol-gel derived overcladding or substrate tube. Prior to sintering, the body is treated with a gaseous mixture containing one or more non-oxygenated sulfur
5 halides, to remove and/or reduce the size of refractory oxide particles, and/or dehydroxylate the body. Removal of metal oxide particles or reduction in their size contributes to drawing of optical fiber exhibiting desirable strength, since such particles act as initiation sites for breakage. Advantageously, the halides include sulfur chlorides, which provide desirable improvements
10 compared to treatment by oxygenated sulfur chlorides such as thionyl chloride (SOCl_2).

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